

Office Action Summary

Application No.

10/813,875

Applicant(s)

WANG ET AL.

Examiner

Thanh-Ha Dang

Art Unit

2163

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2007.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-56 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/5508)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-56 are rejected in this Office Action.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/04/2007 has been entered.

Response to Amendment

3. Receipt of Applicant's Amendment filed 09/04/2007 is acknowledged.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 27 and 48 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 27 and 48 recite a "computer-readable medium" which is not limited to tangible embodiments. In

view of Applicant's disclosure, Specification page 6 [0014] ("various forms of computer-readable media ... including ... other transmission device or channel both wired and wireless"), the medium is not limited to tangible embodiments, instead being defined as including both tangible embodiments (e.g., CD-ROM disks, etc.) and intangible embodiments (e.g., wireless). As such, the claims are not limited to statutory subject matter and are therefore non-statutory. Claims 28-47 and 49-52 are dependent of Claims 27 and 48 respectively, and therefore are also rejected.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 10-32, 36-52 and 54-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,421,675 issued to Ryan et al ("Ryan") and further in view of US Patent No. 6,571,234 issued to Knight et al ("Knight").

As to **Claims 1 and 27**, *Ryan teaches* a method of ranking article identifiers of a result set from an implicit query implied from a user's current context, the method comprising:

- receiving an event concerning the user's current context (*Abstract, lines 1-5*), wherein the event comprises a user interaction with an article stored on a local client device (*Figures 1B, block100A-D, column 4, lines 3-4*), wherein the article is associated with at least one of a plurality of client applications (*column 36 line 46 – column 38 line 15 wherein the search system described is an example of a client application*);
- extracting at least one keyword from the event (*Figure 1A wherein block14,28,30 and 32 processing read on the claimed limitation*);
- ranking the article identifiers (*column 6, lines 13-16*);
- *Ryan does not explicitly teach* generating an implicit query based at least in part on the at least one keyword; performing a search of events based at least in part on the implicit query to determine a result set, wherein the result set comprises one or more article identifiers associated with articles relevant to the implicit query. However, *Knight teaches* generating an implicit query (*column 8, line 48-51*) based at least in part on the at least one keyword (*Figure 2, column 19, lines 45-51 wherein data filtered implicitly equivalent to keyword*); performing a search of events based at least in part on the implicit query to determine a result set (*Figures 3A (block307A), 3D (block360), 4 and 5 (block530), column 11, lines 45-48 and line 52 wherein retrieving entries meeting the user's search/filter criteria read on the implicit query to determine a result set limitation*), wherein the result set comprises one or more article identifiers associated with articles

relevant to the implicit query (*Figures 3C-D, column 20, lines 24-29*). Thus, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine method to manage queries teaching of Knight with search engine teaching of Ryan to provide method and system which enhance and improve the overall performance of computer system that access and display a collective amount of shared interest data and information in response to user's request.

As to **Claims 2 and 28**, *Ryan in combination with Knight teaches* wherein ranking the article identifiers is based at least in part on a preference of a current user (*Ryan, Figures 2 and 3B, column 5, lines 29-32 wherein personalization information such as search customization preferences and wherein information is entered actively once by the user read on preference of a current user limitation; and column 7, lines 36-48 wherein personal hit-list is intended to a current user*).

As to **Claims 3 and 29**, *Ryan in combination with Knight teaches* wherein the preference of the current user is based at least in part on click-through data (*Ryan, Figures 3B and 23, column 33, lines 15-18*).

As to **Claims 4 and 30**, *Ryan in combination with Knight teaches* wherein the preference of the current user is based at least in part on file type (*Ryan, Figure 2, column 5, lines 30-34*).

As to **Claims 5 and 31**, *Ryan in combination with Knight teaches* wherein ranking the article identifiers is based at least in part on meta-data associated with an article (*Ryan, Figures 19 and 20, wherein defined in column 28, lines 19-*

53; column 30, lines 62-66, wherein each content transmitted with the search results made up of web pages listing is tagged, wherein meta-data is interpreted to be data used to describe other data).

As to **Claims 6 and 32**, *Ryan in combination with Knight teaches* wherein the meta-data comprises at least one of bolding, highlighting, italicizing, font color, or heading data (*Ryan, column 30, lines 13-14*).

As to **Claims 10 and 36**, *Ryan in combination with Knight teaches* wherein ranking the article identifiers is based at least in part on number data (*Ryan, column 17, lines 40-45 illustrate the ranking is based on number data*).

As to **Claims 11 and 37**, *Ryan in combination with Knight teaches* wherein the number data comprises a number of letters in the keyword (*Ryan, column 14, lines 57-67, wherein Table 6 illustrates letters associated with a keyword*).

As to **Claims 12 and 38**, *Ryan in combination with Knight teaches* wherein the number data comprises whether a keyword comprises numbers (*Ryan, column 11, lines 30-40, wherein Table 1 illustrates a unique number for each keyword*).

As to **Claims 13 and 39**, *Ryan in combination with Knight teaches* wherein ranking the article identifiers is based at least in part on capitalization data (*Ryan, column 28, line 67, wherein keyword "NHL" read on capitalization data*).

As to **Claims 14 and 40**, *Ryan in combination with Knight teaches* wherein ranking the article identifiers is based at least in part on a number of sources from which the keyword was extracted (*Knight, Figures 2 (block225) and 4 (block408), column 19, lines 39-40*).

As to **Claims 15 and 41**, *Ryan in combination with Knight teaches* wherein ranking the article identifiers is based at least in part on a number of result sets in which the result appears (*Ryan, Figures 3A-B, 7 and 16, column 1, lines 59-60; column 21, lines 28-41*).

As to **Claims 16 and 42**, *Ryan in combination with Knight teaches* wherein the keywords are associated with keyword ranking scores (*Ryan, column 17, lines 36-45; column 20, lines 34-37*).

As to **Claims 17 and 43**, *Ryan in combination with Knight teaches* wherein ranking the article identifiers is based at least in part on the keyword ranking scores (*Ryan, Figure 8, column 21, lines 51-67*).

As to **Claims 18 and 44**, *Ryan in combination with Knight teaches* wherein ranking the article identifiers comprises assigning a higher ranking to article identifiers associated with articles containing higher ranked keywords (*Ryan, column 21, lines 65-67*).

As to **Claims 19 and 45**, *Ryan in combination with Knight teaches* wherein extracting at least one keyword from an event comprises extracting a keyword from at least one of recently typed words, an entire document, a

selected portion of a document, or words surrounding a cursor (*Knight, column 6, lines 43-46*).

As to **Claims 20 and 46**, *Ryan in combination with Knight teaches* wherein extracting at least one keyword from an event comprises determining proper names (*Ryan, column 28, line 67 wherein NHL is equivalent to proper names*).

As to **Claims 21 and 47**, *Ryan in combination with Knight teaches* wherein determining proper names comprises crawling at least one article (*Ryan, column 19, lines 31-32, wherein sending specialist crawlers out to find web site addresses and keywords, wherein website and keywords read on proper names, wherein determining inherently includes in the crawling process*).

As to **Claim 54**, *Ryan in combination with Knight teaches* wherein the article is a document on the client device (*Knight, Figure 3C, block325, wherein each entry is equivalent to a document*), and wherein the event comprises an addition of words to the document (*Knight, Figure 3C, block340, wherein additional text is added*).

As to **Claim 55**, *Ryan in combination with Knight teaches* wherein the article is a document on the client device, and wherein the event comprises a placement of a cursor near words in the document (*Knight, column 16, lines 1-6*).

As to **Claim 56**, *Ryan in combination with Knight teaches* wherein the article is associated with one client application selected from a group consisting of a word processing program, a spreadsheet program, a presentation program,

an e-mail program, an instant messenger program, and a database program (*Knight, column 17, lines 22-24, wherein Prophet-Charts read on a spreadsheet, presentation, and/or e-mail programs*).

As to **Claims 22 and 48** *Ryan teaches* a method of outputting article identifiers of a result set from an implicit query implied from a user's current context, the method comprising:

- receiving an event concerning the user's current context (*Abstract, lines 1-5*), wherein the event comprises a user interaction with an article stored on a local client device (*Figures 1B, block100A-D, column 4, lines 3-4*), wherein the article is associated with at least one of a plurality of client applications (*column 36 line 46 – column 38 line 15 wherein the search system described is an example of a client application*);
- extracting at least one keyword from the event (*Figure 1A wherein block14,28,30 and 32 processing read on the claimed limitation*);
- filtering the result set based on a threshold (*columns 16-17, lines 61-67 and lines 1-6, wherein illustrated within table 8*); and
- outputting the article identifiers associated with the filtered result set (*Figure 6, column 21, lines 14-27*)
- *Ryan does not explicitly teach* generating an implicit query based at least in part on the at least one keyword; performing a search based at least in part on the implicit query to determine a result set, wherein the result set

comprises one or more article identifiers associated with articles comprising the at least one keyword. However,

Knight teaches generating an implicit query (column 8, line 48-51) based at least in part on the at least one keyword (Figure 2, column 19, lines 45-51 wherein data filtered implicitly equivalent to keyword); performing a search based at least in part on the implicit query to determine a result set (Figures 3A (block307A), 3D (block360), 4 and 5 (block530), column 11, lines 45-48 and line 52 wherein retrieving entries meeting the user's search/filter criteria read on the implicit query to determine a result set limitation), wherein the result set comprises one or more article identifiers associated with articles comprising the at least one keyword (Figure 5A, block581). Thus, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine method to manage queries teaching of Knight with search engine teaching of Ryan to provide method and system which enhance and improve the overall performance of computer system that access and display a collective amount of shared interest data and information in response to user's request.

As to **Claims 23 and 49**, *Ryan in combination with Knight teaches* wherein the threshold comprises a number of keywords (Ryan, column 18, lines 50-51, wherein a set number of keywords read on the threshold limitation).

As to **Claims 24 and 50**, *Ryan in combination with Knight teaches* wherein the threshold comprises a minimum weighting score based at least in

part on one or more of a number of keywords multiplier, a source multiplier, and a time multiplier (*Ryan, column 18, lines 5-10 illustrate a number of keywords multiplier, a source multiplier, and a time multiplier*).

As to Claims **25 and 51**, *Ryan in combination with Knight teaches* further comprising determining a ranking score for each of the one or more articles identifiers (*Ryan, column 22, lines 4-11; column 33, lines 31-35, wherein the highest value of P for the keyword or profile type determines the ranking score*).

As to **Claims 26 and 52**, *Ryan in combination with Knight teaches* further comprising arranging the article identifiers based at least in part on ranking score (*Ryan, column 23, lines 12-19, e.g. the web pages are ranked based on Z in block174 of Figure 5*).

Claims 7-9 and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,421,675 issued to Ryan et al ("Ryan") and further in view of US Patent No. 6,571,234 issued to Knight et al ("Knight") as applied to claims 1 and 27 above respectively, and further in view of Pub. No. US2004/0059730 issued to Ming Zhou ("Zhou").

As to **Claims 7 and 33**:

Ryan in combination with Knight teaches all the elements of Claims 1 and 27 as stated above respectively.

Ryan in combination with Knight does not explicitly teach wherein ranking the article identifiers is based at least in part on a term frequency and a document frequency.

Zhou teaches wherein ranking the article identifiers is based at least in part on a term frequency and a document frequency (page 5 [0051]). Thus, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine method for detecting user query intention teaching of Zhou with method to manage queries teaching of Knight and search engine teaching of Ryan to provide method and system which use term frequency and inverse document frequency algorithm to rank article identifiers.

As to **Claims 8 and 34**, *Ryan, Knight in combination with Zhou teaches* wherein ranking the article identifiers comprises determining a rank that is proportional to the log of the sum of a first constant plus the term frequency and inversely proportional to the log of the sum of a second constant plus the document frequency (page 5 [0051, Equation 2]).

As to **Claims 9 and 35**:

Ryan in combination with Knight teaches all the elements of Claims 1 and 27 as stated above respectively.

Ryan in combination with Knight does not explicitly teach wherein ranking the article identifiers comprises determining a rank that is proportional to the log of the sum of a constant plus a term frequency and inversely proportional to the

output of a mapping function that maps ranges of document frequency into constants.

Zhou teaches wherein ranking the article identifiers comprises determining a rank that is proportional to the log of the sum of a constant plus a term frequency and inversely proportional to the output of a mapping function that maps ranges of document frequency into constants (*page 5 [0051, Equation 2]*). Thus, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine method for detecting user query intention teaching of Zhou with method to manage queries teaching of Knight and search engine teaching of Ryan to provide method and system which use term frequency and inverse document frequency algorithm to rank article identifiers.

Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,421,675 issued to Ryan et al ("Ryan"), further in view of US Patent No. 6,571,234 issued to Knight et al ("Knight"), and further in view of Pub. No. US2004/0059730 issued to Ming Zhou ("Zhou").

As to **Claim 53**, *Ryan teaches* a method of ranking article identifiers of a result set from an implicit query implied from a user's current context, the method comprising:

- receiving a contextual event concerning the user's current context (*Abstract, lines 1-5*), the event comprising a user's modification of a file stored on a local client device (*Figures 1B, block100A-D, column 4, lines 3-4*);

- extracting at least one keyword from the contextual event (*Figure 1A wherein block14,28,30 and 32 processing read on the claimed limitation*);
- determining a ranking score for the one or more article identifiers based on one or more of: user preference data (*Figures 2 and 3B, column 5, lines 29-32 wherein personalization information such as search customization preferences read on user preference data*), click-through data (*Figures 3B and 23, column 33, lines 15-18*), file type (*column 37, line 22 wherein journal read on file type limitation*), meta-data (*Figures 19 and 20, wherein defined in column 28, lines 19-53; column 30, lines 62-66, wherein each content transmitted with the search results made up of web pages listing is tagged, wherein meta-data is interpreted to be data used to describe other data*), number data (*column 17, lines 40-45 illustrate the ranking is based on number data*), capitalization data (*column 28, line 67, wherein keyword "NHL" read on capitalization data*), proper names (*column 28, line 67 wherein NHL is equivalent to proper names*), number of sources (*column 16, line 36 wherein a count location read on number of sources limitation*), and number of queries (*column 16, line50 wherein a keyword search count read on number of queries limitation*); and
- ranking the one or more article identifiers in the result set based on the ranking score (*column 6, lines 13-16; Figure 8, column 21, lines 51-67*).
- *Ryan does not explicitly teach generating an implicit query based at least in part on the at least one keyword; performing a search based at least in part*

on the implicit query to determine a result set, wherein the result set comprises one or more article identifiers associated with articles comprising the at least one keyword. However,

Knight teaches generating an implicit query (column 8, line 48-51) based at least in part on the at least one keyword (Figure 2, column 19, lines 45-51 wherein data filtered implicitly equivalent to keyword); performing a search based at least in part on the implicit query to determine a result set (Figures 3A (block307A), 3D (block360), 4 and 5 (block530), column 11, lines 45-48 and line 52 wherein retrieving entries meeting the user's search/filter criteria read on the implicit query to determine a result set limitation), wherein the result set comprises one or more article identifiers associated with articles comprising the at least one keyword (Figure 5A, block581). Thus, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine method to manage queries teaching of Knight with search engine teaching of Ryan to provide method and system which enhance and improve the overall performance of computer system that access and display a collective amount of shared interest data and information in response to user's request.

- *Ryan in combination with Knight does not explicitly teach* term frequency, inverse document frequency. However,

Zhou teaches term frequency, inverse document frequency (page 5 [0051]).

Thus, it would have been obvious to one of the ordinary skill in the art at the

time of the invention to combine method for detecting user query intention teaching of Zhou with method to manage queries teaching of Knight and search engine teaching of Ryan to provide method and system which use term frequency and inverse document frequency algorithm to rank article identifiers.

Response to Arguments

6. Applicant's arguments with respect to claims 1-56 have been considered but are moot in view of the new ground(s) of rejection. Furthermore, Applicant's arguments filed on 09/04/2007 with respect to claims 1-56 have been fully considered but they are not persuasive for the following reasons:

- Applicant argues: In paragraph 5 of page 14, Applicant stated that "Ryan does not disclose a method of ranking article identifiers based at least in part on the preference of a current user".

Examiner responds: Examiner is not persuaded. Ryan teaches in Figures 2 and 3B, column 5, lines 29-32 wherein personalization information such as search customization preferences and wherein information is entered actively once by the user read on preference of a current user limitation; and column 7, lines 36-48 wherein personal hit-list is intended to a current user.

- Applicant argues: In paragraph 2 of page 15, Applicant stated that "Ryan does not disclose ranking article identifiers proportional to the log of the sum of a first constant plus the term frequency and inversely proportional to the log of the sum

of a second constant plus the document frequency. Knight also does not disclose, "ranking the article identifiers comprises determining a rank that is proportional to the log of the sum of a first constant plus the term frequency and inversely proportional to the log of the sum of a second constant plus the document frequency".

Examiner responds: Argument is moot in view of new ground of rejection. See Rejection Section above.

- Applicant argues: In paragraph 1 of 16, Applicant stated that "Ryan does not disclose that ranking the article identifiers is based at least in part on capitalization data".

Examiner responds: Examiner is not persuaded. (Ryan teaches in column 28 line 67, wherein keyword "NHL" read on capitalization data).

Citation of Pertinent Prior Art

7. The prior art made of record and not relied upon in form PTO-892 if any is considered pertinent to applicant's disclosure.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh-Ha Dang whose telephone number is 571-272-4033. The examiner can normally be reached on Monday-Friday from 9:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Thanh-Ha Dang
Examiner, AU 2163

December 17, 2007